

CLAIMS

What is claimed is:

- Sub 1*
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1. (Amended) A method comprising:
- receiving real-time analog data at a personal computer implementing a general purpose operating system;
- generating a real-time event at the personal computer indicating a request to process the real time data;
- determining whether the real-time event has a higher priority than a first event being processed at the personal computer; and
- processing the real-time event if the real-time event has a higher priority than the first event.

- Sub 2*
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2. (Unchanged) The method of claim 1 further comprising continuing to process the first event if the real-time event does not have a higher priority than the first event.

3. (Unchanged) The method of claim 1 further comprising:
- saving the state of the first event at the personal computer prior to processing the real-time event; and
- processing the prior event after processing of the real-time event has been completed.

4. (Unchanged) The method of claim 1 further comprising:

2 receiving a second event while processing the real-time event; and
3 determining whether the second event has a higher priority than the real-
4 time event.

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CD 1 5. (Unchanged) The method of claim 4 further comprising:
2 continuing the processing of the real-time event if the second event does
3 not have a higher priority than the second event.

1 6. (Unchanged) The method of claim 4 further comprising:
2 terminating the processing of the real-time event if the second event has a
3 higher priority; and
4 processing the second event.

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A 1 7. (Amended) A computer system comprising:
2 a chipset;
3 a bus coupled to the chipset; and
4 a central processing unit (CPU), coupled to the bus, that operates
5 according to a general purpose operating system, and processes real-time data
6 received at the computer system.

Bl 1 8. (Unchanged) The computer system of claim 7 wherein the CPU comprises:
2 a timer to generate timing signals at predetermined time intervals; and
3 an event mechanism coupled to the timer to generate real time events.

1 9. (Unchanged) The computer system of claim 8 wherein the CPU further
2 comprises an event handler coupled to the event mechanism to process real-time
3 events.

1 10. (Unchanged) The computer system of claim 9 wherein the CPU further
2 comprises a register coupled to the event mechanism to store real-time data.

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1 11. (Unchanged) The computer system of claim 9 wherein the event
2 mechanism determines the relative priority between real-time events and non-
3 real-time events.

1 12. (Unchanged) The computer system of claim 11 wherein the CPU further
2 comprises an analog to digital converter coupled to the register.

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1 13. (Amended) A central processing unit (CPU) comprising:
2 a timer to generate timing signals at predetermined time intervals;
3 an event mechanism coupled to the timer to generate real time events in
4 response to receiving the timing signals and real-time data; and
5 an event handler coupled to the event mechanism to process the real-time
6 events received from the event mechanism,
7 the CPU operating according to a general purpose operating system.

1 14. (Amended) The computer system of claim 13 wherein the CPU further
2 comprises a register coupled to the event mechanism to store real-time data.

1 15. (Amended) The computer system of claim 14 wherein the event handler
2 verifies whether there is data stored in register upon detecting a real-time event
3 and determines the priority of the real-time event relative to other interrupts
4 received.

1 16. (Amended) The computer system of claim 14 wherein the CPU further
2 comprises an analog to digital converter coupled to the register.

1 17. (New) The method of claim 1 wherein receiving the real-time analog data
2 comprises:
3 converting the real-time analog data to digital data; and
4 storing the digital data at a register.